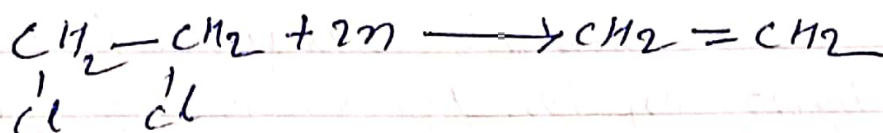
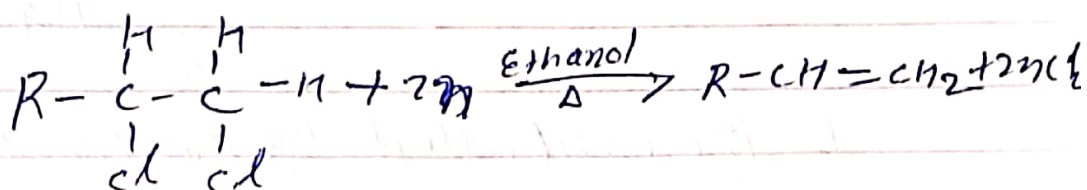


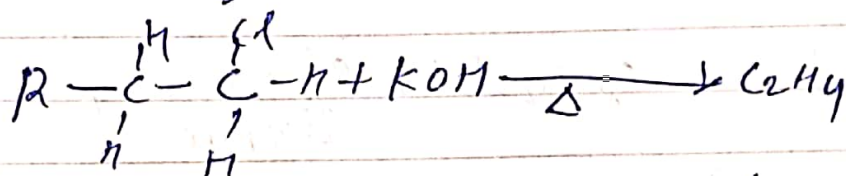
geminal dihalide.

→ When vic dihalide is heated in presence of Zn dust in alcoholic solution alkene is formed.



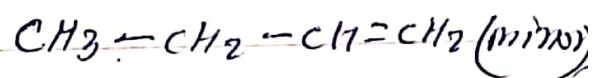
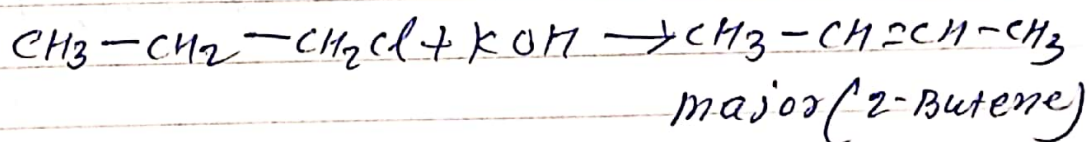
(3) Dehydrohalogenation of alkyl: →

When alkyl halide is heated with alcoholic solution of NaOH or KOH one molecule of hydrogen halide is eliminated and corresponding alkene is formed



Order of formation of alkene from alkyl halide.

In the case of secondary and tertiary alkyl halide Saytzev rule is followed.

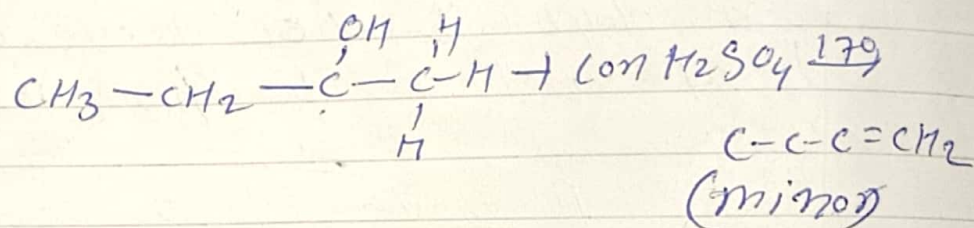


(4) Kolbe synthesis → When aqueous solution or potassium salt of saturated decarboxylic acid is electrolysed

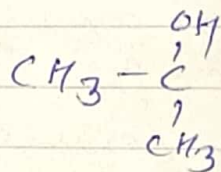
But in the case of secondary and tertiary alcohol, dehydration occurs into ways and there for a mixture of alkene can be obtained.

Example: $\rightarrow$ When 2-butanol is dehydrated in presence of dehydrating agent one butene and 2-butene are mixture obtain, in this mixture is found 2-Butene is major product. This can be explain by Saytzev rule.

Saytzev rule: $\rightarrow$ According to this rule hydrogen is eliminate from those carbon which have least no. of hydrogen atom in the case of dehydration.



$\Rightarrow$ order of dehydration of alcohol 3 $^\circ$ > 2 $^\circ$ > 1 $^\circ$



(2) Dehalogenation of vic-alkyl dihalide:

The compd in which halogen group present on adjacent carbon atom are called vicinal dihalide.

$\Rightarrow$ If two halogen group present in the same carbon atom then it is known as

ALKENE

- ⇒ Alkene are hydrocarbon which containing Carbon-2 double bond in the molecule.
- ⇒ Ethylene is simplest alkene in this group.
- ⇒ The general formula of alkene is C_nH_{2n} . Alkene is also known as olefins means oil formation. forming compd.
- ⇒ Alkenes are more reactive than alkane. Because presence of exposed by electron.
- ⇒ In alkene molecule in carbon which have double bond are sp^2 hybridisation.
- ⇒ In double bond of alkene one sigma bond and one pi bond is present.

Methods of preparation of alkene

(i) Dehydration of alcohol : →
When alcohol is heated in presence of dehydration agent like conc H_2SO_4 one molecule of water is removed and alkene is formed.

Another dehydration agent may be used like P_2O_5 , H_3PO_4 (phosphoric acid) and heated alumina (Al_2O_3) in ethanol

